

CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 (Withdrawn). An adeno-associated virus (AAV) clade comprising at least three AAV members, wherein each member of said AAV clade is phylogenetically related as determined using a Neighbor-Joining heuristic by a bootstrap value of at least 75 % per 1000 isolates and a Poisson correction distance measurement of no more than 0.05.

2 (Withdrawn). The AAV clade according to claim 1, wherein the clade is selected from the group consisting of Clade E comprising as a member AAV8, Clade D comprising as a member AAV7, Clade F comprising as a member AAV9, Clade B comprising as a member AAV2, and Clade C comprising as a member H2.

3 (Withdrawn). The clade according to claim 1, wherein one or more of said AAV members is a non-naturally occurring AAV.

4 (Withdrawn). The clade according to claim 1, wherein two or more of said AAV members are naturally occurring AAV.

Claims 5 - 25. Cancelled.

26 (Withdrawn). An adeno-associated virus (AAV) clade F comprising AAV9 and at least further two member AAV, wherein each member of said AAV clade is phylogenetically related as determined using a Neighbor-Joining heuristic by a bootstrap value of at least 75 % per 1000 isolates and a Poisson correction distance measurement of no more than 0.05.

27 (Withdrawn). The AAV clade F according to claim 26 wherein said clade comprises at least AAV hu.14/AAV9 (SEQ ID Nos: 3 and 123), hu.31 (SEQ ID NOs:1 and 121) and hu.32 (SEQ ID Nos: 2 and 122).

Claims 28 and 29. Cancelled.

30 (Original). An adeno-associated virus (AAV) of serotype 9 comprising an AAV capsid and a heterologous molecule for delivery to a cell,
wherein the AAV capsid is serologically related to a capsid of the sequence of amino acids 1 to 736 of SEQ ID NO: 123 and serologically distinct from a capsid protein of any of AAV1, AAV2, AAV3, AAV4, AAV5, AAV6, AAV7 or AAV8.

Claim 31. Cancelled.

32 (Original). The AAV according to claim 30, wherein said AAV further comprises a minigene having AAV inverted terminal repeats and the heterologous gene operably linked to regulatory sequences which direct its expression in a host cell.

Claims 33 – 40. Cancelled.

41 (Withdrawn). A host cell transfected with an adeno-associated virus according to claim 30.

Claim 42. Cancelled.

43 (Original). A composition comprising an AAV according to claim 30 and a physiologically compatible carrier.

Claim 44. Cancelled.

45 (Original). A method of delivering a transgene to a cell, said method comprising the step of contacting the cell with an AAV according to claim 30, wherein said rAAV comprises the transgene.

Claims 46 – 58. Cancelled.

59 (New). The adeno-associated virus according to claim 30, wherein the AAV capsid is at least 95% identical to the amino acid sequence of SEQ ID NO: 123 over amino acids 1 to 736.

60 (New). The adeno-associated virus according to claim 30, wherein the AAV capsid comprises an AAV9/HU.14 capsid protein selected from the group consisting of:
vp1 capsid protein, amino acids (aa) 1 to 736, SEQ ID NO:123;
vp2 capsid protein, aa 138 to 736, SEQ ID NO: 123 ; and
vp3 capsid protein, aa 203 to 736, SEQ ID NO: 123.

61 (New). The adeno-associated virus according to claim 30, wherein the AAV9/HU.14 capsid protein is encoded by a nucleic acid sequence is selected from the group consisting of:

vp1, nt 1 to 2211;
vp2, nt 2532 to 2211; and
vp 3, nt 2730 to 2211;

wherein the nucleotides numbers are of AAV9/HU.14, SEQ ID NO: 3.